

WHAT IS CLAIMED IS:

Sub A
C1 AT 1. Process for treating a polished semiconductor wafer comprising

polishing a surface of a semiconductor wafer; and

immediately after polishing the semiconductor wafer, bringing the semiconductor wafer into contact with an aqueous treatment agent solution for oxidizing the polished surface by action of the aqueous treatment agent solution.

2. Process according to Claim 1, comprising

bringing the semiconductor wafer into contact with the aqueous treatment agent solution containing an oxidizing agent and an alkaline component.

3. Process according to Claim 1, comprising

bringing the aqueous treatment agent solution into contact with the semiconductor wafer by spraying the semiconductor wafer with the aqueous treatment agent solution.

4. Process according to Claim 1, comprising

bringing the aqueous treatment agent solution into contact with the semiconductor wafer by dipping the semiconductor wafer into the aqueous treatment agent solution.

5. Process according to Claim 1, comprising

bringing the aqueous treatment agent solution into contact with the semiconductor wafer by and applying the aqueous treatment agent solution to the polished surface of the semiconductor wafer by means of a cloth which has been moistened with the aqueous treatment agent solution.

- C 6. Process according to Claim ¹⁴_A 1, comprising

bringing the semiconductor wafer into contact with the aqueous treatment agent solution in a polishing machine.

- C 7. Process according to Claim ¹⁴_A 1, comprising

bringing the semiconductor wafer into contact with the aqueous treatment agent solution in an unloading station of a polishing machine.

8. The process as claimed in Claim 1, comprising

storing the semiconductor wafer in deionized water after contact with the aqueous treatment agent solution.

9. The process as claimed in Claim ¹⁴_A,

wherein the aqueous treatment agent solution comprises an aqueous solution of

(1) from 0.02% to 3.0% by volume, based upon the total solution volume, of an oxidizing agent;

(2) from 0.01% to 2.0% by weight, based upon the total solution weight, of an alkaline component; and

(3) the balance up to 100% by volume being water based upon the total solution volume, and the balance up to 100% by weight being water, which is based upon the total solution weight.

10. The process as claimed in Claim ¹⁴_A,

wherein the aqueous treatment agent is at a temperature range of from 18°C to 65°C.

C

11. The process as claimed in Claim ¹⁴₁₂,

wherein the oxidizing agent is hydrogen peroxide and the alkaline component is selected from the group consisting of tetramethylammonium hydroxide, ammonium hydroxide, potassium hydroxide, sodium hydroxide, potassium carbonate and the mixtures thereof.

12. The process as claimed in Claim 9,

wherein the oxidizing agent is hydrogen peroxide and the alkaline component is selected from the group consisting of tetramethylammonium hydroxide, ammonium hydroxide, potassium hydroxide, sodium hydroxide, potassium carbonate and the mixtures thereof.

2025-03-04 14:00:00

Add
B2

Add C1
C2

Add
D2